

# Impact of Economic Variables on the Performance of the Jordanian Banking Sector

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## Abstract

The article aims to appear the level of achievement in the Jordanian commercial banks, there are several goals for this study as a study developments in the Jordanian banking sector and financial legislation in addition to realizing the concept of banking performance ,in addition to the main factors that determine the level of performance as well as the degree and quality of performance in the domestic commercial banks, compared with foreign commercial banks, which operates in Jordan, and measure the level of concentration of the banking sector of Jordan, on the other hand the study used some statistical methods to test the degree of performance for commercial banks, and to measure the performance of the Jordanian Commercial Banks ,also the study relied on a methodology (Panzar-Rosse) to evaluate the performance of commercial banks, which contributed to test the assumptions which adopted by the study in order to determine the effect of independent factors on the dependent variable, thus can formulate some equations that led to show results, and notably that there is no relationship between performance in the banking sector and economic variables such as; inflation, gross domestic income, balance of payments and budget deficits, The results also showed that there is a very high banker concentrating for the study sample on assets, in addition to the presence of concentrating in banking deposits, results showed also concentrating in bank credit facilities, with it's close to the average rate.

**Keywords:** economic variables, concentration banking, banking performance

## Introduction

The Jordanian banking sector Occupies a prominent place among other sectors of national economy that effects financial and social, which touches different segments of Jordanian society through a lot of businesses and activities that affect and are affected by elements of national economy in addition to the role of the influential played by commercial banks when providing banking services successive and modern to made it the most important sector for the efficiency and ability to deal positively and effectively with internal and external developments. This requires from commercial banks efficient capability to analyze and manage risks in scientific and practical modern methods, as well as efficient management of investment portfolios, departments of the creative management for sources of funds and their usages , to achieve high performance we must adopt plans and policies for each commercial bank, which rely on the translation of plans set to the achievements, and improve the operational efficiency of the optimal exploitation of the production inputs in order to reach a high quality product at the lowest possible cost, enabling them to progress and continue all the way to the best performance. The level of monopoly is reflected on the management and profitability of commercial banks which decline of achievement , profitability and then a affect on quality of the banking and financial services provided , that leads neglecting to meet the desires of customers that lead weakness in performance, in contrast, the good performance of Jordanian Commercial Banks

**Problem of the study :** I have to highlight the problem of the study by answering the questions:

- 1 - Do macroeconomic factors affecting the degree of performance of commercial banks that operating in Jordan?
- 2 - Is the banking concentration affects on the degree of performance?
- 3 - Is the size of the bank affects the degree of performance?

## Hypotheses of the study

The main hypothesis: There is no statistically significant effect of the four largest banks concentration and macro-economic variables, and performance of banking on the other hand. And emanated the following sub-hypotheses:

1. No statistically significant effect of a concentration ratio between the four largest banks and (IA) performance.
2. No statistically significant effect of a concentration ratio between the largest four banks and the rate (INF) inflation.
3. No statistically significant effect of a concentration ratio between the largest four banks and the rate Growth in GDP.
4. No statistically significant effect factor affecting the rate of four banks concentration among the factors that affecting the concentration ratio greater banks in terms of deposits and in terms of credit facilities

**Aim of study:** This study aimed to measure the performance of commercial banks because of the large role played by commercial banks in the various sectors of the states economic to access the output of high quality and excellence.

### Objectives of the study

It came this study to achieve the following objectives;

1. To identify the macroeconomic factors that affecting on the performance of commercial banks.
2. Identify the impact of banking concentration on the performance
3. Identify the factors that affecting on the concentration of banking.

**Methodology of the study.** Mathematical models will be tested, to clarify the community and a sample of the study, to measure the variables of the study, through these data were collected and the statistical methods used in data analysis.

**Society and the study sample .** Consists of the study population of all Jordanian commercial banks and foreign banks which operating in Jordan( the twenty-four banks at the end of 2011), divided by thirteen banks as Jordanian, eight branches of foreign banks operating in Jordan, and three Islamic banks, I have been selected some Jordanian commercial banks that listed their names in Amman Stock Exchange.

**Data collection methods;** The information and data that were used in this study by secondary sources which include reports and statistical bulletins issued by the Central Bank of Jordan, the annual reports of the income statements and balance sheets that issued by the Jordanian commercial banks and foreign banks. The study aimed to identify the degree of performance of commercial banks, to test the hypotheses, it's used multiple regression analysis (Pooled Data Regression)), based on a statistical program (E.Views 5.0) The advantage of multiple regression analysis is to commensurate with the data in the form of time series and cross-sectoral, is the most suitable for analysis , multiple regression analysis was used (White'sheteroskedasticity consistent standard errors & covariance, 1980) in order to get rid of the problem of heterogeneity of variance, which may contain data , where the homogeneity of variance is one of the basic assumptions underlying the regression analysis, as well as there is another assumption important for the decline is the lack of a correlation sequence between the values of the dependent variable Autocorrelation)) and this is also corrected automatically because the analysis is based on the residuals and not on the actual values of the variables, as well as the requirement of normal distribution of data is not necessary according to the methodology of multiple regression analysis for the same reason as before, and finally, the presumption of the lack of multi-linear variables is automatically because the analysis as mentioned earlier is based on the residuals and not on the actual values of the variables.

**The study models;** To measure the performance of commercial bank , rely on (Panzar-Rosse Approach) methodology to assess performance in commercial banks, using a (Panzar-Rosse) , based on the methodology for the purposes of testing hypotheses that have been formulated and designed the model will identify the impact of independent factors on the dependent variable, and therefore can be formulated the following equation:

$$IA_{it} = f(W_t + Z_t) + e_t \dots\dots\dots (1)$$

Where:

$IA_{it}$ : the dependent variable ( represents the profitability of the bank), which is a percentage of net profits before taxes to total assets of the Bank.  $W_t$ : are the independent variables associated with the structuring of the Jordanian banking sector that include the concentration ratio. (CR4)

$Z_t$  is an independent variables related to the economy of Jordan, including the inflation rate (INF), and the rate of growth in gross domestic product (GDP), and the percentage of the current account balance of payments to GDP (PB), and the percentage of the budget deficit to GDP . (PBD) $e_t$ : a coefficient of the error in calculation. In more detail, we can recast the previous equation as follows:

$$IA_{it} = a_1 + B_1 CR4 + B_2 INF_t + B_3 GDP_t + B_4 PB_t + B_5 PBD_t \dots\dots\dots (2)$$

Where is;

$IA_{it}$ : is a percentage of net profits before taxes to total assets.

$CR4_t$ : focus on the ratio of the four largest banks in the Jordan, period t measured in either the size or the size of deposits, credit facilities.

$INF_t$ : is the rate of inflation in period t.

$GDP_t$ : is the rate of growth in GDP in the period $t$

$PB_t$ : is the ratio of current account balance of payments to GDP in period $t$   $PBD_t$ : the proportion of the budget deficit to gross domestic product.

$e_t$ : is the coefficient of error in the calculation.

Finally used a third model (below) to clarify the factors affecting the performance, where performance

measurement through the concentration ratio in deposits CRD 4 and the percentage of concentration in the credit facilities CRL4, so that these two variables dependent variables in the model and then use a number of independent variables, and It is worth mentioning here that the rate of concentration in the four banks indicate the proportion of the control of the four largest banks in terms of both volume of deposits or the volume of credit facilities ,thus I formulated mathematical model as follows:

$$CRD4_t, CRL4_t = a_t + B_1 LA_{i,t} + B_2 INF_t + B_3 GDP_t + e_t \dots \dots \dots (3)$$

#### Previews studies

**Study(Ahmed Almazari ,2012) entitled : " Financial Performance Evaluation of Some Selected Jordanian Commercial Banks .** This study attempted basically to measure the financial performance of some selected Jordanian commercial banks for the period 2005-2012. It is evaluator in nature, drawing sources of information from secondary data. The financial performance of banks is studied on the basis of financial variables and ratios. In this paper an attempt was made to analyze the financial performance of seven selected Jordanian commercial banks using simple regression in order to estimate the impact of independent variable represented by; the bank size, asset management, and operational efficiency on dependent variable financial performance represented by; return on assets and interest income size. It was found that banks with higher total deposits, credits, assets, and shareholders' equity do not always mean that has better profitability performance. It was also found that there exists a positive correlation between financial performance and asset size, asset utilization and operational efficiency, which was also confirmed with regression analysis that financial performance is greatly influenced by these independent factors. This study can be a source of help to bank managers to improve their financial performance and formulate policies that will promote effective financial system. The study also recommends measures that could be adopted by banks to ensure soundness in their operations. **Study(Anh Tuan Tran , 2010 ) entitled : " Impact of Legal Environment on Bank Performance: An Empirical Study from a Developing Country .***This study has highlighted the effects of the institutional environment on the performance of business organizations through empirical evidence across both developed and developing countries. In the pursuit of this type of evidence, this paper clarifies the nature of the relationship between the banking regulatory framework and bank performance in the case of Vietnam. With this objective, the study uses cross-section data from 152 Vietnamese banks. In the model of this study, bank performance is a dependent variable. The reform of capital adequacy requirements (BS), the reform of government intervention and supervision (GS), and the prudent implementation in monetary policy (MP) are independent variables. To examine the relationship between the regulatory framework and bank performance, this study uses confirmative factor analysis to test the reliability and validity of this correlation. By using the ordinary least squares technique, the hypothesis on the relationship between the regulatory framework and bank performance is measured. Results are consistent with the hypothesis: the regulatory framework has a positive impact on the performance of banks in the case of Vietnam. In order to test the robustness of the model is also tested. And then, implications for macroeconomic and macro-finance policies are drawn for the case of Vietnam.* **Study (Husni Khrawish, 2011 ) entitled: " Determinants of Commercial Banks Performance: Evidence from Jordan " .** In this study and in order to show the Determinants of commercial banks performance, there are two categories, namely internal and external factors that effects on commercial banks performance. Internal determinants of statement variables and non-financial statement variables. While financial statement variables relate to the profitability, which are within the control of bank management, can be broadly classified into two categories, i.e. financial decisions which directly involve items in the balance sheet and income statement; nonfinancial statement variables involve factors that have no direct relation to the financial statements. External factors are those factors that are considered to be beyond the control of the management of a bank. This study comes to examine and analyze the factors that might affect on the Jordanian commercial banks performance during the period from 2000 through 2010. This study applied a version of the model developed by Demerguç-Kunt and Huizingha (1999), Haron, Sudin (2004), Toni Uhomoibhi, (2008), Athanasoglou , Panayiotis P. and *et al*, ( 2008), and Ben Naceur and Goaid (2010).) By using Multiple Linear Regression Model. The analysis revealed that there are significant and positive relationship between ROA and the Bank size( LOG TA ) , Total liabilities/ total Assets ( TL /TA ) , Total Equity/total Assets(TE/TA), Net Interest Margin ( NIM )and Exchange Rate(ERS) of the commercial banks and there are significant and negative relationship between ROA and Annual Growth Rate for Gross domestic product (GDPGR), and Inflation Rate (INF) of the commercial banks . Also this study found that there are significant and positive relationship between ROE and the Bank size( LOG TA ) , Total liabilities/ total Assets ( TL /TA ),Net Interest Margin ( NIM ) , Exchange Rate(ERS) and Loan / Total assets ( L/TA), and there are significant and negative relationship between ROE and Annual Growth Rate for Gross domestic product (GDPGR), and Inflation Rate (INF) of the commercial banks . **Study (Ohoud Kasawneh and Razan Salem,2011 ) entitled:" The Major Factors that Affect Banks' Performance in Middle Eastern Countries.***This paper mainly concentrates on evaluating the major factors that affect the commercial banks' performance in the Middle East region based on factor analysis technique. In our study, we choose 23 variables*

and analyze them according to factor analysis techniques (PCA), in order to extract them in six different factors based on their importance to banks' performance. The results revealed that the first factor (banks' characteristics) is considered the most important factor to banks' performance. On the contrary, the sixth factor (other factors) is considered the least important factor that influences commercial banks' performance in the Middle East region. Our results suggest that commercial banks in Middle East region should concentrate on the six factors, mainly variables in the first factor, in order to improve their performance and compete efficiently with global commercial banks. **Study(Rahila Munir, Rehmat Ullah Awan & Zakir Hussain ,2009 ) entitled : "Investment, Savings, Interest Rate and Bank Credit to the Private Sector Nexus in Pakistan".** This study examines long run and short run association among Investment, Savings, Real Interest rate on Bank deposits and Bank Credit to the private sector, accompanied with the impact of financial liberalization on key macro economic variables in Pakistan for the period 1973 to 2007. **ARDL** Bounds Testing Approach has been applied for co-integration of annual time series data. To test the order of integration of the variables, **DF-GLS and Ng-Perron** Tests have been employed. The results show that Private Investment is positively affected by Savings, Real interest rate on bank deposits, Bank credit to private sector and Public investment in the long run in a developing country like Pakistan, supporting Complementarily Hypothesis of Mckinnon-Shaw (1973). **Study (Tobias Olweny and Themba Shipho , 2011 ) entitled : " EFFECTS OF BANKING SECTORAL FACTORS ON THE PROFITABILITY OF COMMERCIAL BANKS IN KENYA .** The first objective of this study was to determine and evaluate the effects of bank-specific factors; Capital adequacy, Asset quality, liquidity, operational cost efficiency and income diversification on the profitability of commercial banks in Kenya. The second objective was to determine and evaluate the effects of market structure factors; foreign ownership and market concentration, on the profitability of commercial banks in Kenya. This study adopted an explanatory approach by using panel data research design to fulfill the above objectives. Annual financial statements of 38 Kenyan commercial banks from 2002 to 2008 were obtained from the CBK and Banking Survey 2009. The data was analyzed using multiple linear regressions method. The analysis showed that all the bank specific factors had a statistically significant impact on profitability, while none of the market factors had a significant impact. Based on the findings the study recommends policies that would encourage revenue diversification, reduce operational costs, minimize credit risk and encourage banks to minimize their liquidity holdings. Further research on factors influencing the liquidity of commercial banks in the country could add value to the profitability of banks and academic literature.

**Operational definitions:** Percentage of net profits before taxes to total assets: (IA) is a nonprofit bank one the most important indicators that should be taken care of, where is the profit and optimize the main objective sought by the commercial banks, but to maximize profits limited by several considerations with sufficient liquidity and the pursuit safe using of funds, and ensure the rights of depositors customers additional restrictions which limit the ability of commercial banks to maximize profits, and in this research it relies on the percentage of net profit before taxes to total assets as a measure of the profitability , this percentage will be calculated as:  $\text{profit before tax to assets(IA)} = \text{Net profit before taxes} / \text{total assets}$ .

Concentration ratio in the credit facilities (CRL 4) and the percentage of concentration in the deposits (CRD4): Reflect the concentration ratio is generally about the concentration of the banking sector in the largest banks, and usually is used for a specified number of banks in this standard depending on the number of banks operating in the country, and in this research will use the ratio Concentration of the top four Jordanian banks due to the low total number of banks located, the concentration ratio based on the size of deposits and the size of credit lines, and reflect the ratio of concentration in the four banks over the control( of the four largest Jordanian banks) in terms of both volume of deposits or the volume of credit facilities (for the banking market of Jordan, extending concentration ratio of greater than zero slightly to one If the ratio was close to zero, it refers to high performance among banks, but if close to the ratio of one would indicate poor performance and the monopoly of the banking market by the four largest banks, and the concentration ratio can be calculated mathematically as follows:

Concentration of the top four the proportion of deposits banks (CR4D) =  $\text{total deposits of the four largest banks} / \text{total deposits of all banks}$ .

Concentration for the top rate of four banks loans = (CR4L)  $\text{Total loans, the four largest banks} / \text{total loans for all banks}$ .

Inflation rate(INF): knows inflation on general rise in the price level, and is known as inflation affects all economic variables so that increased negative impact it, and here comes the using of inflation to see its impact on the profitability of the banks which is expected to be impact negatively on the profitability .Rate of growth in gross domestic product(GDP): The purpose of this variable to measure the impact of economic growth on the bank profitability where it is supposed that contribute to economic growth. The proportion of the current balance in the balance of payments to GDP: (PB) affects the balance of payments on all economic variables in the state , the most important economic growth; inflation, unemployment rate, exchange rate and interest rates.



Where they often have a large deficit in the balance of payments that lead to bad effects on the economy as a whole. The proportion of the budget deficit GDP: (PBD) This variable also among macroeconomic variables that have a direct impact on all economic activities, Banks affected by dual result of increased budget deficit, which may resort Governments to domestic borrowing, particularly from banks to cover the deficit, which contributes to increase the profitability of banks.

Methods of banking concentration. To identify the concentration of banking was being the beginning of the most important economic factors that affect the on Performance, and to determine the extent of the relationship that linked with the market concentration, as shown in this concept (Market Concentration), the relative distribution of the total volume of the market between the institutions involved in it, and the market concentration of the most important the more market elements used, for example, in the United States is used to measure market concentration as an indicator to determine the likelihood of mergers and antimonopoly, the degree of concentration, and states that there is a direct correlation between the level of market concentration and monopoly power, since the lower the level of concentration behavior was closer to the competition, the greater the level of concentration behavior was closer to the monopoly, and then there is an increase in market power or monopoly, also there are some measures to measure market concentration which measure the degree of monopoly, as measures concentration of absolute (Absolute Measures) and measures of concentration relative (Relative Measures), and measures motor (Dynamic Measures), the most common and widely used standards in the literature and Economic Studies is the ratio of the concentration index Hervndal - Hirschman due to the difficulty of applying other measures due to lack of information and data, and in this study will be used to market concentration in this study.

Measure of the concentration Ratio: known concentration ratio (CR) as the sum of market shares for the largest (n) an institution in a particular industry, and can use more than one ratio to measure the concentration in an industry, for example, we can measure the concentration ratio for four or eight institutions in an industry (CR4, CR8), where a mathematically according to the following equation:

$$CR_n = \sum_{i=1}^n S_i$$

$S_i$  ;It represents the market share of the institution i from the overall size of the industry n larger number of institutions working in industry and therefore the higher the concentration ratio increased monopoly power and said the degree of performance in the market and vice versa in case the institutions sizes are similar, the concentration ratio will fall between the minimum amount of major institutions n divided by the number of institutions working in industry m and a maximum amount  $CR_n \leq 1$  ( $\leq n$ ), if the concentration ratio of the four largest institutions exceed 50% or the percentage concentration of the eight largest institutions exceed 70%, this concentration is granular, while if the ratio of concentration of the four largest institutions less than 40% of the industry are of a high degree of performance.

Components of the structure of the banking system. structure of the banking system; the Jordanian Central Bank and licensed banks of Jordan, which include commercial banks, investment, Islamic, in addition to licensed banks to non-Jordanian and specialized lending institutions, and nonbank financial institutions, and savings institutions, long-term and representative offices. The Central Bank plays an important roles in the supervision and control over commercial banks', also managing the needs of foreign currency for the country where intervene in the exchange market to stabilize the exchange rate and negotiate with central banks and international institutions, practiced the process of issuing currency, thus is responsible and directly for the important part of the total the money supply. (Al-Nabulsi, 1994). The commercial banks play an important roles to receive savings deposits and time deposits and demand, providing safety and solvency, liquidity, especially when the facilities available through the network spread of branches, and at the same time they lend those savings to the private sector through the provision of advances or loans or discount bills of exchange, they also lend money to the public sector through the purchase of treasury bills and government bonds, or through direct investment in government institutions. (Hourani, 1990). The development banks, they have an increasing role in developing countries, especially if many of the economies of developing countries facing shortage of effective demand for capital, and because of the scarcity of investment projects that are profitable, therefore they do not only work to finance medium-and long-term, but is working to provide technical services on a large scale (such as the feasibility study, and study the costs and provide advice with respect to marketing. (Indian, 2000). Interested in commercial banks in general achieved by through the primary use of funds owned, therefore, the loans represent the director Statute of the Bank which constitute the largest proportion of the assets of the bank, come financial investment class II, which comes from the other assets in importance terms, the sources and resources which refers to the two entrances, one of the bank deposits, the most important elements in the bank, which has two entrances will be converted into outputs. (Cavallo and Rossi,. 2002).

**Results of analysis and testing of hypotheses.** Descriptive statistics for all sample banks. Depending on the Table (1) we note the following:

-The average ratio of net profit before tax to assets (IA)% about 1.3% and the standard deviation of about 1.6%, the yield has ranged between 7.2% and 6.1% approximately. These statistics indicate that there is great disparity between the profitability of banks sample.

- The average inflation during the study period, 2.84%, , average economic growth of 7.19% , the average rate in the balance of payments deficit to -0.7% and the average ratio of budget deficit 5.07%.

- The average concentration ratio for the four largest banks in terms of deposits, 76% approximately, while the average concentration ratio for the four largest banks in terms of credit facilities, approximately 50%, and show these statistics in general that the market is the Jordanian banking market is the center for more than 75% of the deposits belonging to the four banks only, while the rest of the banks share the remaining quarter, and because about half of the credit facilities granted by the four largest banks, while the remaining half the remaining banks.

**Table (1) Descriptive Statistics for the sample bank**

	INF	GDP	PB	PBD	CR4D	CR 4L
Mean	.0284	.0719	.0072.-	-.0507	.7563	.4950
Median	.0300	.0633	.0041	-.0324	.8017	.6162
Maximum	.0630	.1085	.1164	-.0200	.8059	.8073
Minimum	.0070	.0268	-.1778	-.1053	.6839	.2039
Std. Dev.	.0147	.0272	.0832	.0302	.0529	.2319
Skewness	8010.	-.0365	-.8349	-.7860	-.3257	-.0846
Kurtosis	3.5180	1.7426	2.9415	2.0842	1.2444	1.4119
Jarque-Bera	19.963	11.170	19.657	23.307	24.692	17.961
Probability	.000	.0038	.0001	.0000	.00000	.0001.
Observations	169	169	169	169	169	169
Cross sections	17	17	17	17	17	17

#### **The correlation matrix between the variables of the study:**

Table (2) reviews the results of correlation analysis between all the variables of the study. The significance of the correlation matrix in that it gives the idea about the relationship of variables to each other and the direction of the relationship between each variable and another. Despite the fact that this matrix may give an idea of the multi-linear between the independent variables (multicollinearity), which is a condition of decline, but the method is statistical, which was used here is multiple regression analysis, where the resolution of all problems that may appear in the data, such as the problem of multi-linear or normal distribution (Normality) or non-homogeneity of variance (Heteroscedasticity) because it is based mainly on regression analysis of the residuals (Residuals), and not through the original values of the variables.

**Table (2) Pearson correlation matrix between the variables of the study**

	IA	INF	GDP	PB	PBD	CR4L
<b>INF Pearson Correlaton Sig. (2-tailed)</b>	.269** .000					
<b>GDP Pearson Correlaton Sig. (2-tailed)</b>	.129 .079	-.437** .000				
<b>PB Pearson Correlaton Sig. (2-tailed)</b>	-.473** .000	-.573** .000	-.025 .737			
<b>PBD Pearson Correlaton Sig. (2-tailed)</b>	.082 .263	-.417** .000	.241** .001	.101 .168		
<b>CR4L Pearson Correlaton Sig. (2-tailed)</b>	-.263** .000	.030 .681	-.260** .000	-.051 .488	-.298** .000	
<b>CR4D Pearson Correlaton Sig. (2-tailed)</b>	.032 .667	-.696** .000	.333** .000	.248** .001	.886** .000	-.383** .000

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\*. Correlation is significant at the 0.05 level (2-tailed).

Through the previous table, we can infer many of the relationships of statistical significance The positive relationship between inflation and profitability. Negative relationship between profitability and the balance of payments and the percentage of concentration banks in terms of credit facilities. The presence of statistically significant relationships between the concentration ratios and between the numbers of variables.

### The results of multiple regression analysis

The results of multiple regression analysis for all sample banks

And here was tested the effect of independent variables selected on the dependent variable for net profit before tax (IA), Table (3) review the results of regression analysis for this model.

**Table (3) Results of the analysis model study No. 2 of the study sample**

Variable	CR4L usage				CR4D usage				(Dum) variable Usage			
	OLS		Cross-Section Weight		OLS		Cross-Section Weight		OLS		Cross-Section Weight	
	Coeff.	t-stat.	Coeff.	t-stat.	Coeff.	t-stat.	Coeff.	t-stat.	Coeff.	t-stat.	Coeff.	t-stat.
A	0.002	0.098	0.023	1.563	0.006-	0.043-	0.084	0.798	0.030	0.210	0.120	1.181
B <sub>1</sub>	0.005	0.572	0.002	0.317	0.012	0.075	0.074-	0.607-	0.003	0.020	0.075-	0.629-
B <sub>2</sub>	0.158-	0.745-	0.091-	0.790-	0.157-	0.444-	0.227-	0.976-	0.245-	0.706-	0.315-	1.417-
B <sub>3</sub>	0.063	0.948	0.006-	0.133-	0.044	0.441	0.040	0.535	0.034	0.334	0.032	0.425
B <sub>4</sub>	0.041-	1.983**	0.054	3.802*	0.047	2.703*	0.055	4.429*	0.049	3.045*	0.057	4.809*
B <sub>5</sub>	0.062-	1.082	0.033-	0.849	0.076	0.366	0.062	0.421	0.080	0.375	0.052	0.350
Dum	None								0.008	2.239**	0.010	3.205*
R <sup>2</sup>	0.459		0.583		0.458		0.582		0.481		0.609	
Adj.R <sup>2</sup>	0.417		0.551		0.415		0.549		0.436		0.575	
F.Stat.	10.880		17.946		10.816		17.813		10.800		18.156	
Prop	0.000		0.000		0.000		0.000		0.000		0.000	

\*, \*\*, \*\*\* denote variable is significant at 1%, 5%, and 10% level.

Note: using White Heteroscedasticity consistent standard errors & covariance.

Where the previous table shows the results of the analysis using ((CR4Land using CR4D)) again, and a third with a dummy variable, during the previous table we can note the following:

- There was a great consistency between the results of the analysis using either method of least squares (OLS) or the way the regression weighted by sector. (Cross-section Weights) as the direction and importance of transactions was very similar between the two methods.
- There was a negative impact and important statistical between the dependent variable (IA) and the proportion of current account (GDP to PB), and this means that the deficit in the balance of payments improves the profitability of banks may be the reason for this is that one of the sources of funding the deficit may also be through direct borrowing from commercial banks, thereby increasing the returns of these banks.
- Note that you do not either concentration ratio (CR4L or CR4D) any impact on the profitability of banks, this means that the Jordanian banking market concentration have no effect on profitability.
- Note of the statistical significance of the variable Dum, that there is a difference between the profitability of local banks and the profitability of foreign banks.

### Results of analysis for the third study model ;

This module aims to identify factors affecting the performance and by identifying factors that affect the concentration ratios. CR 4 The following table reviews the results of regression analysis for this model.

**Table (4) Results of the analysis model study**

Variable	CR4L using		CR4 D using	
	Coeff.	T-Stat.	Coeff	T-Stat.
A	0.060	0.221	0.856	24.190*
B <sub>1</sub>	1.844	1.791***	0.108-	0.755-
B <sub>2</sub>	3.194-	2.315**	3.983-	24.528*-
B <sub>3</sub>	0.969	2.022**	0.392	4.438*
R <sup>2</sup>	0.625		0.830	
Adj.R <sup>2</sup>	0.601		0.820	
F-Stat.	26.482		77.787	
Prop	0.000		0.000	

\*, \*\*, \*\*\* denote variable is significant at 1%, 5%, and 10% level.

Note: using White Heteroscedasticity consistent standard errors & covariance.

Through the previous table we can note the following:

- There was a negative impact and statistically significant for inflation (INF) and the rate of inflation on the proportion of the four largest banks in terms of deposits (CR4D).
- There was a positive impact and statistically significant to the profitability of the bank (IA) and the growth rate in gross domestic product (GDP) on the proportion of the four largest banks in terms of deposit facilities (CR4D).
- There was a negative impact and statistically significant rate of inflation focuses on the proportion of the four

largest banks in terms of credit facilities CR4L)).

- There was a positive impact and statistically significant rate of growth in gross domestic product (GDP) focus on the proportion of the four largest banks in terms of credit facilities CR4L)).

### Results and conclusions

**First. Results.** The study indicated the following results:

1. there were a positive correlation between financial performance and the most independent variables, which was also confirmed with regression analyst.
2. There isn't any impact either concentration CR4L) or CR4D) on the profitability of banks.
3. There is a positive impact on the performance of banks implications for macroeconomic and macro-finance policies
4. There was a negative impact and statistically significant for inflation (INF) on the proportion of the four largest banks in terms of deposits CR4D.
5. There was a positive impact and statistically significant to the profitability of the bank (IA) and the growth rate in gross domestic product (GDP) on the proportion of the four largest banks in terms of deposit facilities CR4D.
6. There was a negative impact and statistically significant rate of inflation on the proportion of the four largest banks in terms of credit facilities CR4L.
7. There was a positive impact and statistically significant of growth rate in gross domestic product (GDP) on the proportion of the four largest banks in terms of credit facilities CR4L.

**Second. Conclusions;** The results of the study to formulate the following recommendations:

1. The impact of deposits structure was positive on profitability, it is good for banks trying to attract the largest possible size of the deposits and banking institutions through the development of a number of policies that deal with this matter.
2. The attempt to give banks the government loans on concessional terms contribute to improve the profitability of the bank.
3. The concentration of the banking sector is usually in the interest of monopolists of the market, but the results of the analysis proved that there is no trace of the concentration on performance. Thus, the pursuit of a large market share of deposits or loans is not the primary goal because it has no impact on profitability.
4. The positive impact of inflation on the profitability for foreign banks' refers to the safety policy with respect to expected inflation. This makes it imperative for banks trying to follow the routes more effective in predicting the inflation rate.
5. Necessary to focus on strengthening the performance for the banking services offered by local banks to enable them to survive and compete in front of foreign banks.

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